

REMARKS/ARGUMENTS

No amendments are made.

Applicants acknowledge that the status identifiers for Claims 42-43 were incorrect when these new claims were presented on November 10, 2008. As these claims have now been entered and considered, they now carry the appropriate identifier of "Previously Presented." It is believed that to now indicate that these claims are "New" would be incorrect and would further confuse the record.

Applicants appreciate the withdrawal of the 112, second paragraph rejection, the anticipation rejection and the obviousness rejection as noted at page 2 of the Official Action.

The obviousness rejection over Perret (Helv. Chim. Acta, 1945, 28, 558-575) is traversed. Perret studies the action of benzoyl peroxide on unsaturated hydrogenated hydrocarbons in the presence of iodine catalyst. The role of iodine as a catalyst has been accepted and is clearly set forth in the reference, for example at page 3 of the translation:

The essential difference that characterizes our contribution to the study of this problem with respect to that of our predecessors consists in the fact that we have operated systematically in the presence of iodine, which is used as a catalyst.

However, the Examiner has pointed out that phenyl iodide is produced in the reference reaction, citing to "page 25" of the translation,¹ and has taken the position that a reaction like that claimed herein where an organic substance comprising at least one ethylenic double

¹ The reference translation pages are not numbered. Applicants have found "Page 25" cited by the Examiner having the title "Experimental results¹⁶," at the top thereof. This pagination has been used throughout.

bond, capable of adding a free radical to its ethylenic double bond, is iodinated with molecular iodine is obvious over this disclosure.

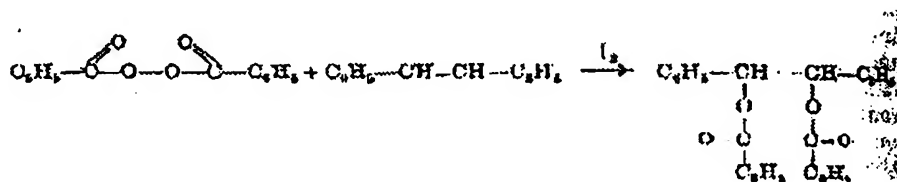
Page 27 of the translation, however, shows that the phenyl iodide produced in Perret does *not* originate from a reaction of iodine with an organic substance comprising at least one ethylenic double bond, but instead is a side reaction between iodine and benzoyl peroxide:

Reduced volume of $\text{CO}_2 = 20.0 \text{ cm}^3$ (0.88 mmol). This
carbon dioxide comes mainly from the reaction: $\text{I}_2 +$
 $(\text{C}_6\text{H}_5\text{COO})_2 \rightarrow 2 \text{ CO}_2 + 2 \text{ C}_6\text{H}_5\text{I}$. The result of this
quantitative analysis is therefore fully in conformity with
that of the test that furnished us with the stilbene-diol

Thus, any consideration of the disclosed reaction as an iodination reaction is limited to the reaction between iodine and benzoyl peroxide and *not* between iodine, an organic substance comprising at least one ethylenic double bond, and benzoyl peroxide. For further confirmation see page 29 of the translation where it is clearly explained that in the absence of an acceptor (i.e. an organic substance comprising at least one ethylenic double bond) for the benzoyl remainders formed, the dominant reaction becomes decarboxylation by the formation of phenyl iodide:

These results show that in the absence of an acceptor for the benzoyl remainders formed, the dominant reaction becomes decarboxylation by the formation of phenyl iodide.
 It becomes more and more complete when the concentration of the iodine increases.

In Perret the reaction between benzoyl peroxide and stilbene that is catalyzed by iodine yields the following non-iodinated product (translation page 15):



resulting from the rupture of the peroxide at the oxygen bridge thereby furnishing two benzoylated remainders which quickly add to the double bond of the unsaturated hydrocarbon and *not* to an iodinated product. See page 16 of the translation:

In the absence of iodine one does not get dibenzoate and the reaction has the complexity of "non-normalized" reactions. In contrast, in the presence of this catalyst, the peroxide acts in conformity with its oxidizing power by transforming the hydrogen carbide in to benzoylated glycol. All this occurs as if in the presence of the activator, the rupture of the peroxide is produced in the area of the oxygen bridge by furnishing two benzoylated remainders, secured quickly on the double bond of the hydrocarbon.

It is thus *not* the case that one wishing to cause a reaction between iodine and an organic substance comprising at least one ethylenic double bond, as claimed here, would look to Perret and change the ratio of reagents therein, as Perret does not suggest that such a reaction would produce an iodinated product. Accordingly, the rejection over Perret should be withdrawn.

Similarly, the obviousness rejection over Chambers in view of the March textbook and Moczygemba should be withdrawn.

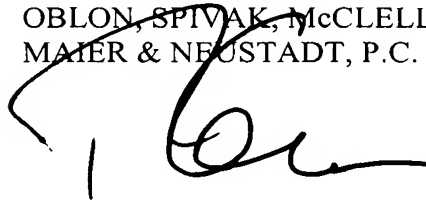
Chambers, the primary reference, completely fails to disclose the use of one of Applicants' critical ingredients - a free radical generating substance. Instead, Chambers specifically *avoids* such use, instead relying on UV or gamma radiation (page 88). March and Moczygemba do not change this fact, nor would they motivate such a drastic change in reaction components and conditions, as these references simply confirm that free radical generating substances exist. Even if one were to change the Chambers reaction by *introducing another chemical specie into the reaction* as postulated in the rejection – i.e., by

adding thereto a free radical generating substance for which no explanation or motivation for so doing is provided by the Office, one would not arrive at the particularly claimed process as presently claimed. For example, nowhere are any of Applicants' method steps disclosed or suggested, nor are variants 1 and 2 and the mole ratios of components described therein. For these reasons, and because even the combination of Chambers, March and Moczygemba fail to describe or suggest what Applicants' are claiming, the rejection should be withdrawn.

In view of the above Applicants submit that this application is now in condition for allowance, and early notification to this effect is earnestly solicited

Respectfully submitted,

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